

IC Chip Testing Module

Requirements Capture

9-11-08

Group# SD0819

Austin Vandeberg

Dan Nygard

Thomas Severance

Zachary Schneider

Introduction

With the introduction of new more complicated circuits in the ECE program here at NDSU, the need for IC chips that deliver the correct logic they were designed for is a must. IC chips in the lab are very inconsistent and can create many headaches for its designers. We are set out to create a device that will easily check an IC chip for the correct logic and display a good or bad signal letting the user know that the chip they chose is working properly. This would not only speed up the time it takes to design a project but will allow the user to download new chip manufacture numbers to the device so that the “IC chip testing module” will never be out of date.

Requirements

- **This device will be small enough to be portable and wire free, running only on rechargeable batteries.**
- **The user will be able to select from a variety of chip designs they want to test.**
- **The final design must be rugged enough to handle day to day use.**
- **The device will incorporate a touch screen to allow for easy selections between chip designs.**
- **The device will incorporate a com port upload allowing for download of future chip designs.**
- **Eye appealing and easy to use GUI.**
- **Include a ‘most used chip column’ with a last used chip on the bottom.**
- **Easy to use a chip holder (Not just regular IC holder for breadboards)**

Summary

The IC chip testing module will be a useful tool not only in the NDSU ECE lab stations but for students all over who are interested in a quick and efficient way to check the status of there IC chips.

